

### **REMARKS**

In response to the Examiner's Action mailed on February 18, 2004, claims 1 to 2, 12-18 and 26 to 32 are canceled and claims 3-11 and 19-25 are amended. The applicants hereby respectfully request that the patent application be reconsidered.

An item-by-item response to Examiner's objections or rejections is provided in the followings:

#### **1. *Objection to Drawings***

The Examiner objects to the drawings for failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 12. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 62. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

In response to the objection, Figs. 1, 2, and 3 are amended and the reference signs 12 and 62 are now specifically illustrated in these amended figures.

#### **2. *Claim Rejections -35 USC 112***

The Examiner rejects Claims 5, 6, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites the limitation "one said electrodes" in the third line. There is insufficient antecedent basis for this limitation in the claim. Claim 6 recites the limitation "one said electrodes" in the third line. There is insufficient antecedent

basis for this limitation in the claim. Claim 8 recites the limitation "one said electrodes" in the third line. There is insufficient antecedent basis for this limitation in the claim. Claim 9 recites the limitation "one said electrodes" in the third line. There is insufficient antecedent basis for this limitation in the claim. There is only one electrode that has been claimed as near the trench floor and only one electrode claimed as near a sidewall. The examiner is unclear as to whether there is more than one electrode near each of the trench floor and a sidewall.

In response to the rejections, claims 5,6,8, and 9 are amended to specifically provide the electrode is either a first or a second electrode depending on the location of the electrode as definitively specified in the amended claim 3. The amended claims now particularly point out and distinctly claim the subject matter, which the applicants regard as the invention.

### ***3. Rejection of Claims under 35 USC§102(e)***

The Examiner rejects Claims 1,4-7,10,12-18, 21-24 and 26-32 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/01 08276 to Janssen. According to the Examiner, as to claims 1,12-18, and 26-32, Janssen discloses all the limitations of the claimed invention. Janssen discloses an optical switch including: a trench defined the trench floor electrode (32) may be transparent, but it isn't required to be transparent. See paragraph [0035].

In response to the rejection, claims 1 and 12-18 and 26-32 are canceled. The cancellation of the claims 1, 12-18 and 26-32 does not constitute an admission of the lack of novelty or obvious under the cited prior art references. The cancellation of the claims is for the purpose to issue the allowed claims as a patent and to prosecute the rejected claims later in a Continuous Application.

### ***4. Claim Rejections -35 USC 103(e)***

The Examiner further rejects Claims 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/01 08276 to Janssen. According to the Examiner, as to claims 8 and 9, Janssen discloses all

the limitations of the claimed invention, except Janssen does not appear to specifically disclose that a positive electric field is applied to the electrode near the trench floor surface for enhancing an operation of actuating the optical switch and that a positive electrical field is applied to the electrode near one of the sidewalls for enhancing the deactivating of the optical switch. It is known in the art that applying the positive electrical field to an electrode will cause the electrode to repel the metal ions from the electrode. It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply a positive electric field to the electrode near the trench floor surface when activating the optical switch and to apply a positive electric field to the electrode near the sidewall when deactivating the optical switch, for the purpose of repelling the metal ions from a switch surface where they are not desired in order to allow more metal ions to coat the surface where they are desired. The switch would experience less of the unwanted attenuation if there were no metal ions on the sidewall surface when the switch is deactivated and the switch would experience more of the desired reflectivity if less of the ions remained on the trench floor when the switch is activated.

The Examiner further rejects Claims 11 and 25 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/01 08276 to Janssen in view of U.S. Patent No. 6,449,406 to Fan et al. According to the Examiner, as to claims 11 and 25, Janssen discloses all the claimed limitations, except Janssen does not appear to specifically disclose that the optical switch and the optical fibers are supported on a substrate. Fan et al. discloses an optical switching device where input and output optical fibers are mounted on a substrate along with the optical switches, in order to secure the components in position and maintain the desired alignment between the optical fibers and the optical switches. See Fig. 1 OA. It would have been obvious to one having ordinary skill in the art at the time the invention was made to support the optical fibers and the optical switches on a substrate in order to secure the optical fibers and the optical switches in the desired position and to maintain the desired alignment between the fibers and the switches.

In response to the rejections, claims 8 and 9 and 11 and 25 are amended to depend on the amended claims 2 and 19. The amended claims 2 and 19 are now amended as independent claims with all the limitations included as an allowable

claims as will be further discussed below. The amended 8, 9, 11 and 25 would not be obvious and therefore also be allowable according to the instructions as provided by the Examiner in the next section.

*Allowable Subject Matter*

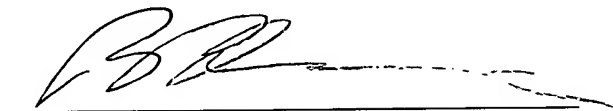
The Examiner instructs that Claims 2, 3, 19, and 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Referring to claims 2, 3, 19, and 20, the primary reason for the claims being allowable is the inclusion of at least one halide and/or pseudohalide compound in the electrolytic solution in all the claims.

In response to the Examiner's instructions, claims 2, 19, and 20 are amended. Claims 2, and 19 are rewritten as independent claims to include all the limitation of the base claim and any intervening claims. These amended claims and these claims now amended, as dependent claims of these amended claims, would therefore be allowable.

With the canceled and amended claims and the reasons provided above, the applicant hereby respectfully requests that Examiner's objection and rejections under 35 USC § 112, 102 and 103 be withdrawn and the present application be allowed.

Respectfully submitted,  
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By



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